

FIG. 1

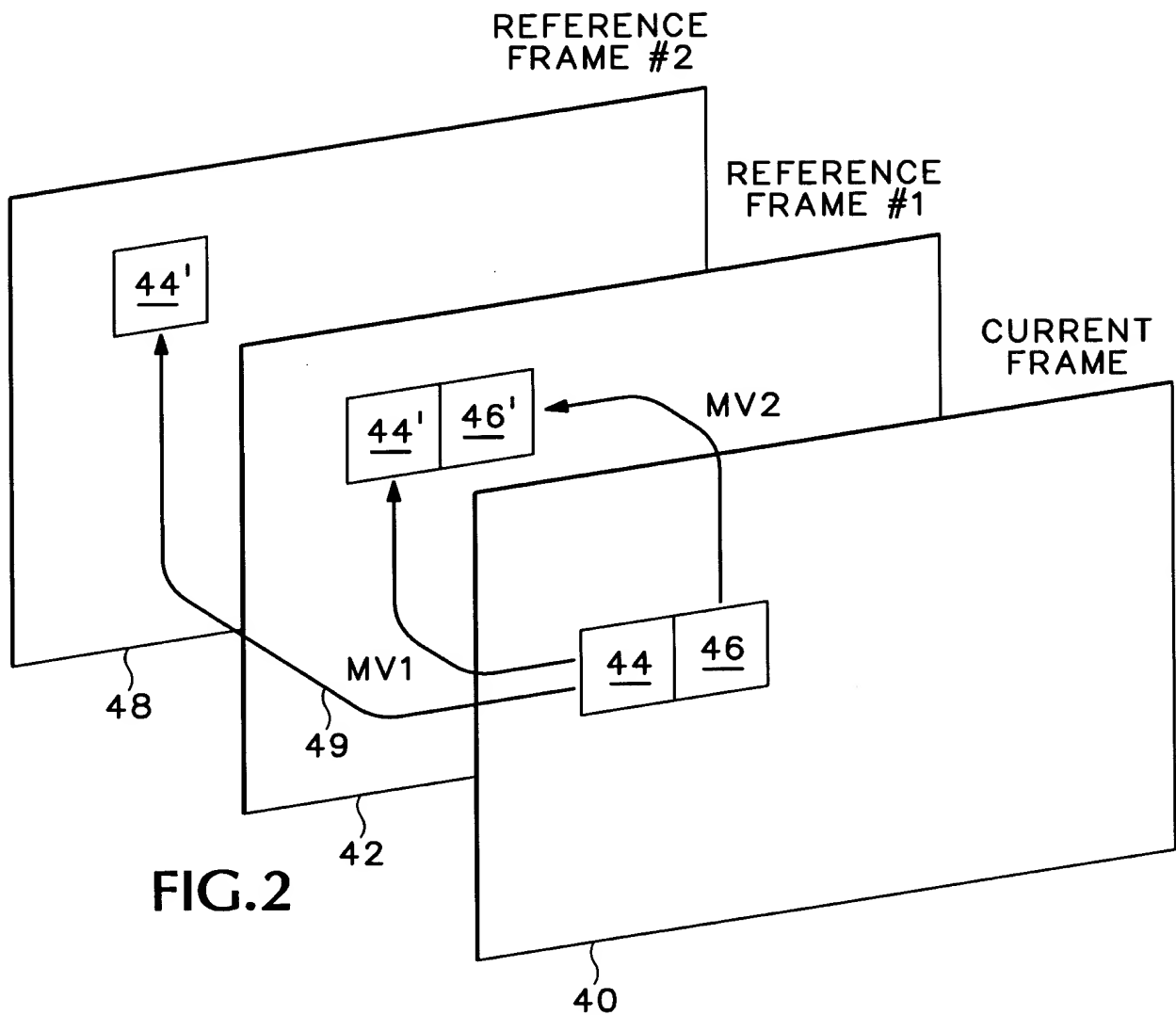


FIG.2

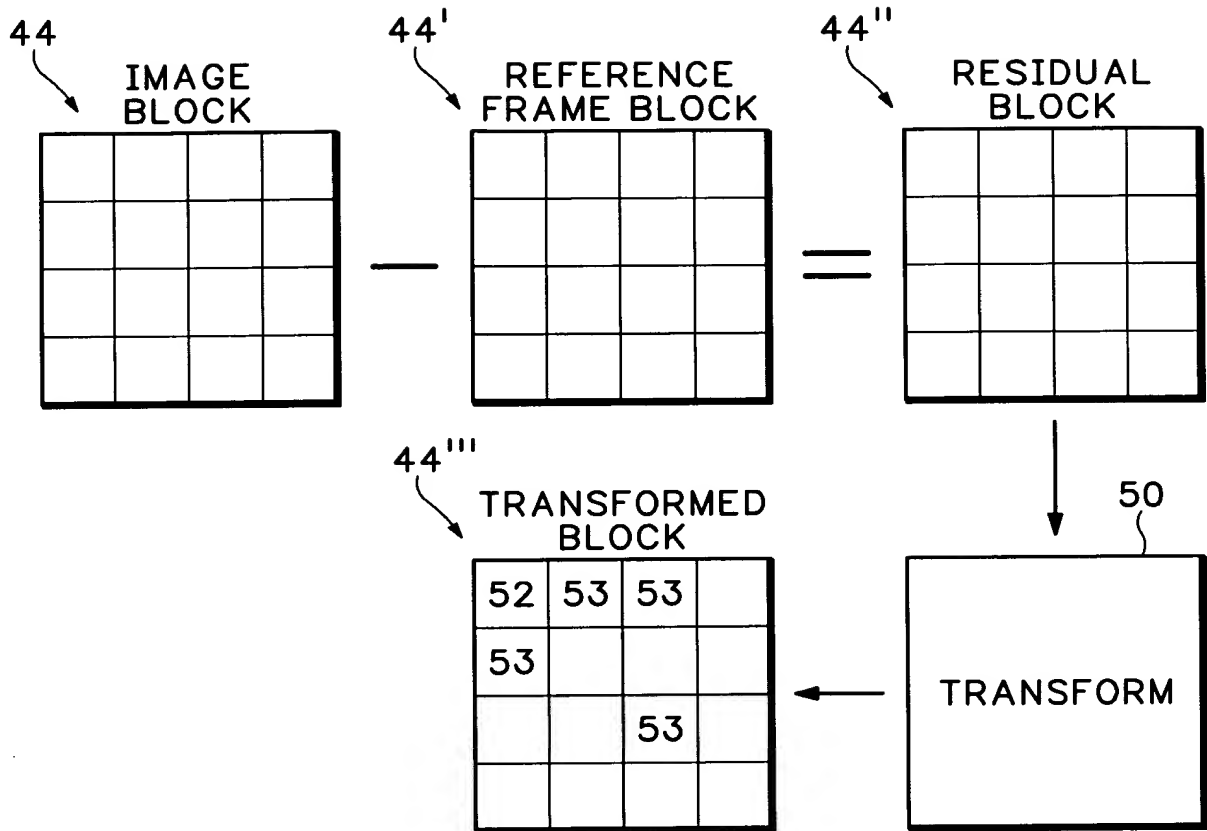


FIG.3

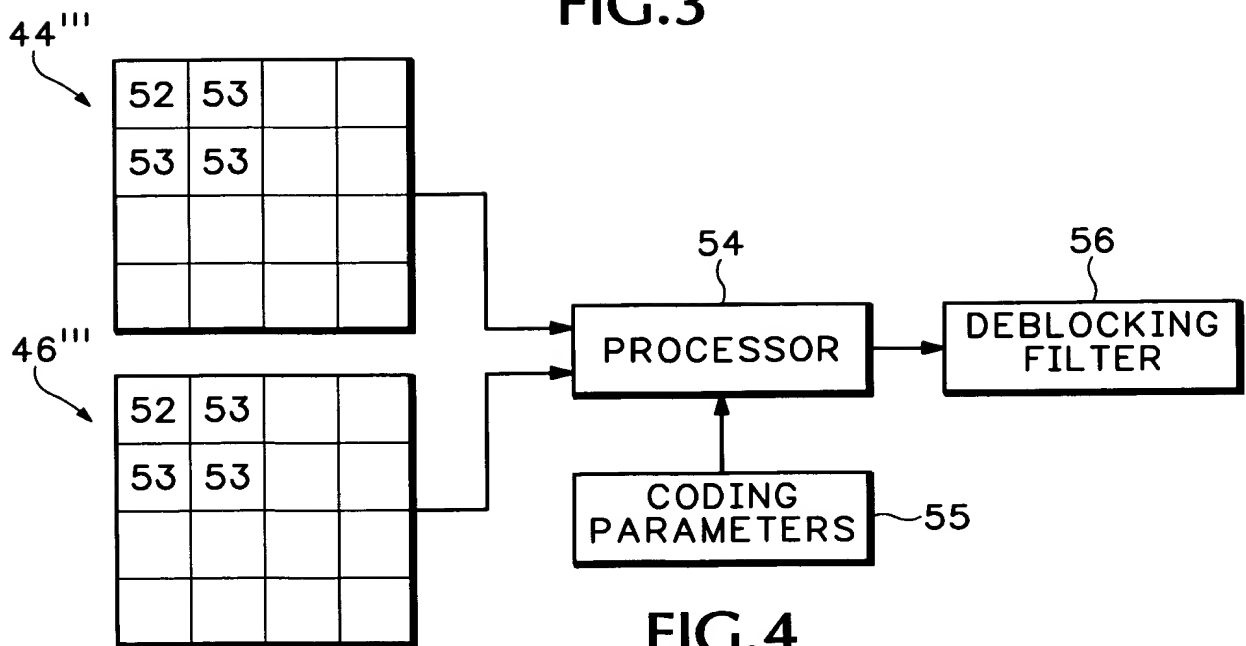


FIG.4

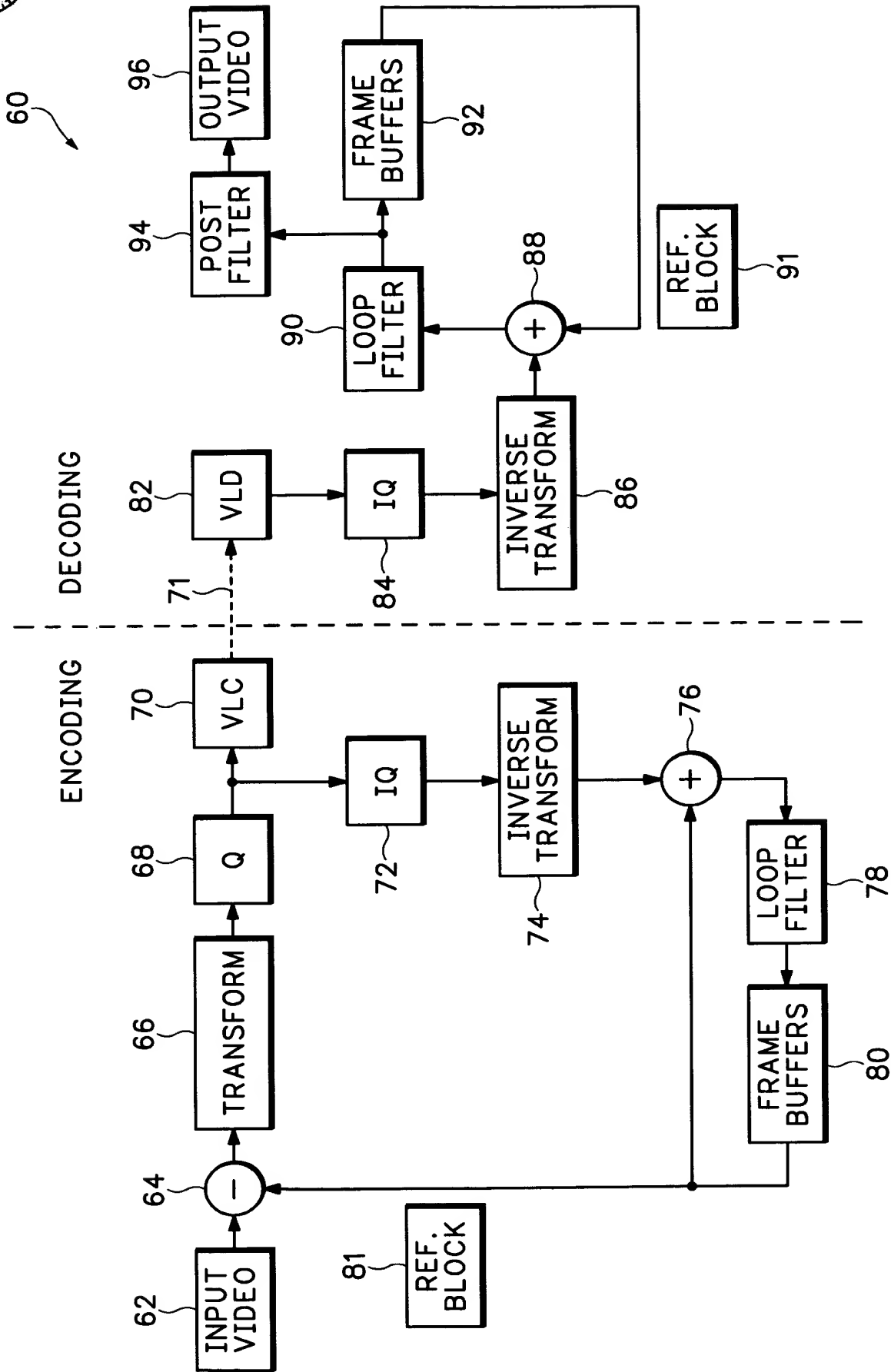


FIG.5

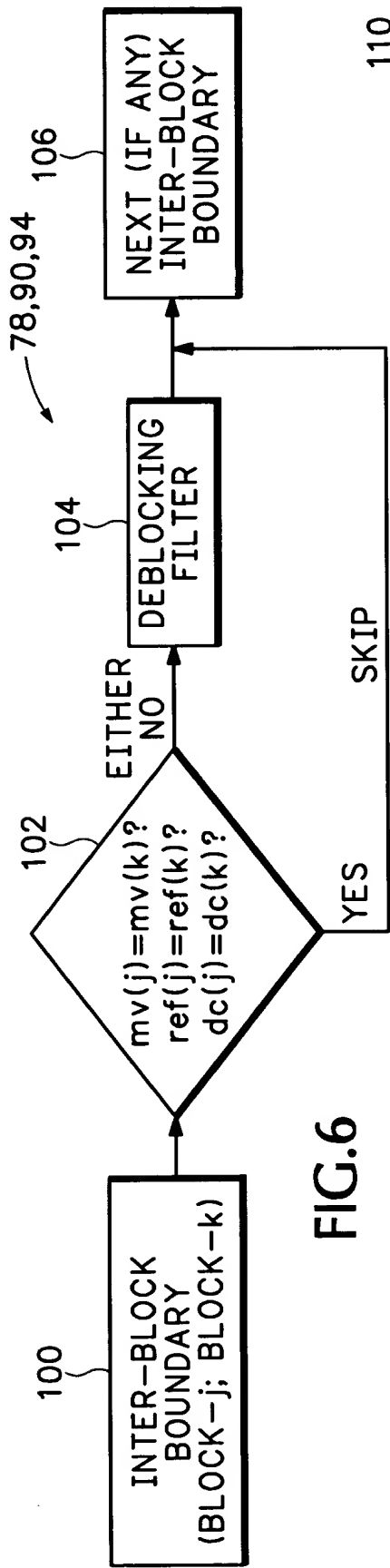


TABLE 1. COMPARISON BETWEEN TML AND THE PROPOSED LOOP FILTERING SCHEME

| VIDEO SEQUENCE | QP | BITRATE (bps) | | PSNR (Y) | | PSNR (U) | | PSNR (V) | | NEW LOOP FILTER RELATIVE TIME SAVING |
|---------------------------------------|----|---------------|--------|----------|--------|----------|--------|----------|--------|--------------------------------------|
| | | TML | SLA | TML | SLA | TML | SLA | TML | SLA | |
| Akiyo_cif 300 FRAMES @ 30fps | 25 | 33151 | 32346 | 34.050 | 34.161 | 38.934 | 39.042 | 40.300 | 40.369 | 63.0% |
| | 30 | 22775 | 22295 | 30.797 | 30.920 | 36.610 | 36.964 | 38.680 | 38.771 | 68.2% |
| Foreman_cif 300 FRAMES @ 30fps | 25 | 165115 | 162740 | 30.835 | 31.006 | 38.124 | 38.174 | 38.966 | 39.030 | 43.1% |
| | 30 | 101357 | 100215 | 27.580 | 27.836 | 36.745 | 36.811 | 37.267 | 37.362 | 42.1% |
| Foreman_qcif 100 FRAMES @ 10fps | 25 | 28681 | 28677 | 29.822 | 29.931 | 37.586 | 37.631 | 37.773 | 37.938 | 38.4% |
| | 30 | 15999 | 15822 | 26.250 | 26.435 | 36.432 | 36.323 | 36.222 | 36.283 | 41.3% |
| Template_cif 260 FRAMES @ 30fps | 25 | 336200 | 329115 | 28.277 | 28.490 | 33.982 | 34.143 | 36.009 | 36.184 | 45.3% |
| | 30 | 168133 | 159789 | 24.583 | 24.927 | 32.334 | 32.628 | 34.512 | 34.799 | 50.6% |

FIG. 7